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ARCHEOLOGICAL RESEARCH ASSOCIATES TULSA OK

AN ASSESSMENT OF THE CULTURAL RESOURCES OF THE ENGLEWOOD LAKE P--ETC(11)

1979 K C DUNCAN, M L FRICKE

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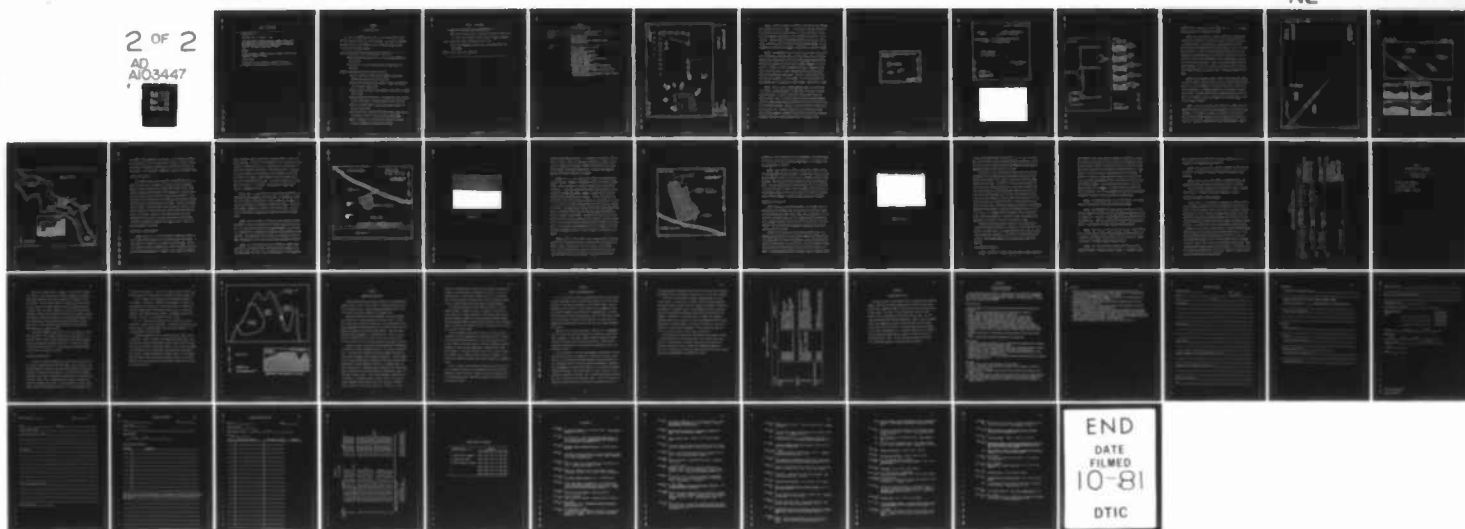
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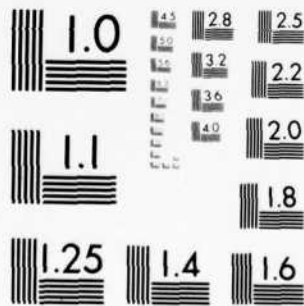
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

TABLE 2 (Continued)

<u>Flakes (Cont.)</u>	
4c	unifacial tools on tertiary flakes
5	finishing flakes; characterized by a length under 1.5 cm and sometimes by "lipped" striking platforms, suggesting they were struck from bifacial edges during the thinning process. No broken flakes were included.
<u>Debris</u>	
6	chips and chunks, irregular pieces of material with no clear inverse or obverse surfaces
7	broken flakes
8	retouched or utilized broken or unidentified flakes

TABLE 3

HISTORIC ARTIFACT KEY

In order to standardize the historic artifact terminology a basic artifact key was compiled by Dr. Charles Cheek. This key is an attempt to describe briefly the commonest historic artifacts which are good chronological indicators as well.

Glass - purpled glass (sun colored amethyst) 1880-1914

machine made bottles (mold marks up to the lip and around base)

1903-present

mold made with lip hand finished (mold mark stops below lip)

1800-1903

Ceramics - hardpaste white ware any time to present

transfer decorated (stippled complex geometric and floral
monochromes - various colors) 1810-1870

decalcomenia (polychrome floral designs in decal form applied
over the glaze) 1880s-1930s

transfer decorated (simple floral designs in gray green or green)
1870s?-1910s

sponge decorated (floral designs in gaudy purples, reds, yellows,
blues) 1840s-1880s, in Oklahoma apparently post Civil War
annular ware (sharp bands of blue, black, brown on white, or
yellow) 1820s-1880s

hand painted floral (isolated green leaves, black stems, red or
blue flowers) usually on cups and saucers, 1840s-1880s

domestic stoneware - salt glazed exterior/brown slip glazed
interior, probably but not certainly pre-1900

TABLE 3 (continued)

same for salt glazed interior and exterior
white zinc (called Bristol) slip glaze on exterior and interior or
on exterior with brown slip glaze interior, 1890s to present
Pipes - white clay pipes, in Oklahoma pre-Civil War
elbow pipes (glazed gray, grown, buff, and orange) post Civil
War-1890s
Metal - hole-in-top- cans, 1860-1910

TABLE 4
HISTORIC ARTIFACT DATA

Site No.	Artifact type
Bv-32	1/16" window glass cobalt glass, 2 medicinal bottle neck; completely molded clear bottle glass
Bv-33	piece of slate with "I" or "H" 1 1/2" staple shotgun casing, Winchester 8" railroad spike fragment of brass lock case bottle glass fragments, 4 machine made glass jar lip and finish pressed glass fragment, 2 bottle base fragment window glass fragment, 3/32", 2 hardpaste whiteware body and rim fragments, minimum two vessels, 10 stoneware crock base fragment, Albany interior, Bristol exterior stoneware mixing bowl rim fragment, Albany interior, clear glaze exterior (?)

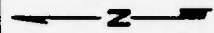
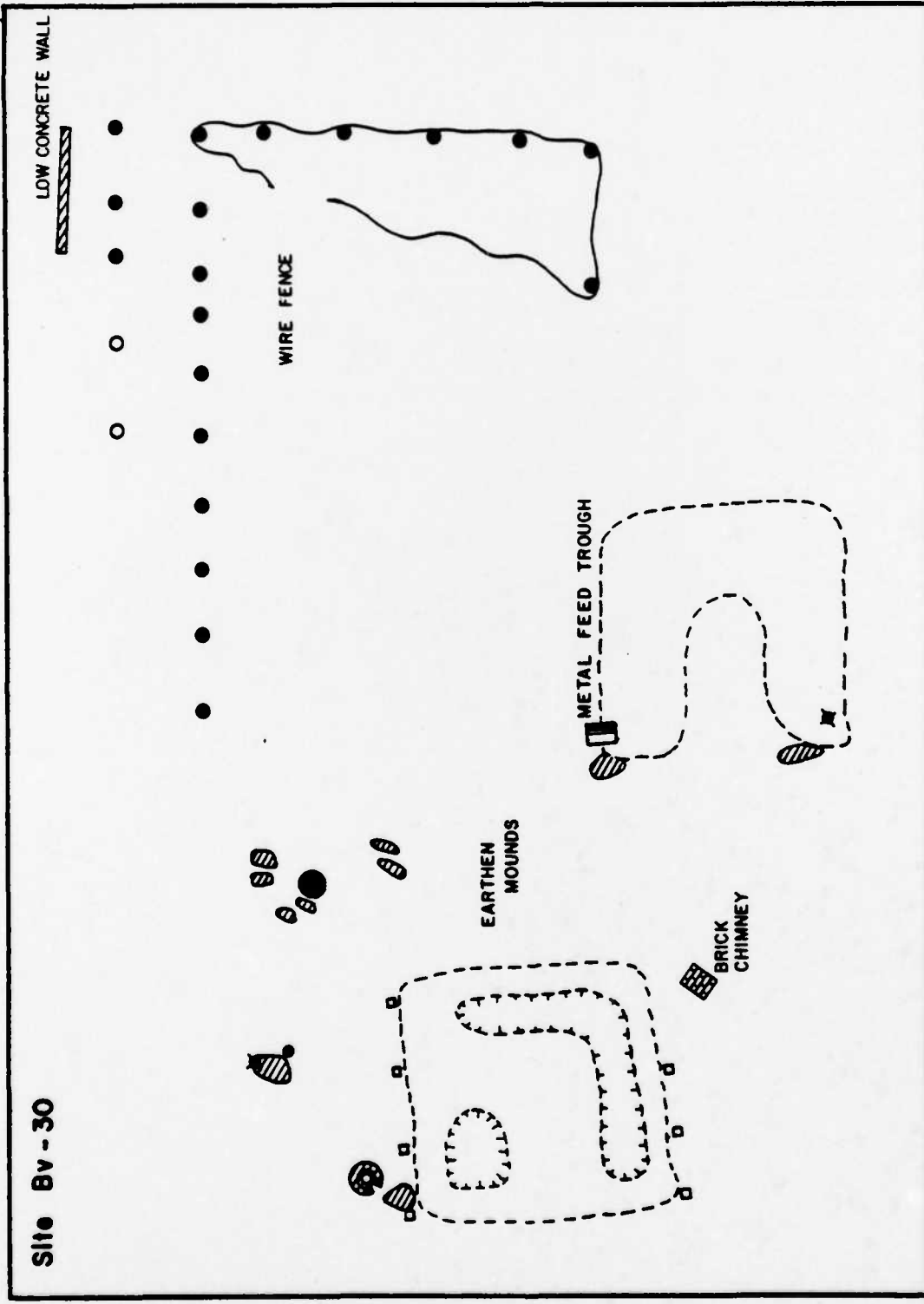


FIGURE 15

- TREE
- TREE STUMP
- ✕ POST
- PIPE WELL
- CONCRETE PIER
- ◐ STONE

Bv-32. This site (Figure 16) occupies an area about 30 by 40 meters at an elevation of 2135 ft. AMSL. It is located in the upper reaches of the bottomland of the river where there is a mixed association of Short Grass and Sandsage. According to local informants, this was the site of a school. There are two main rectangular foundations outlined by native stone. Artifacts observed include salt-glazed stoneware sherds, tin can fragments, and bottle glass fragments. Preservation of the site is good.

Bv-33. This homestead (Figure 17) has at least three, and possibly more, architectural features. One is a cellar which is full of refuse--purple glass, window glass, pressed glass, hard paste whiteware sherds, stoneware with Albany slip glaze, brick and cement fragments, tin cans, and wire. Another is a house foundation (platform of cement and local rock), while the third is a small concrete and stone foundation about which are scattered some buggy parts. The site is approximately 75 by 50 meters and is located at 2100 ft. AMSL. It is in the bottomland of the Cimarron with an association of Short Grasses. Preservation is good.

Bv-37. This is a large farming homestead (Figure 18) consisting of a series of planted windbreaks in conjunction with several discrete artifact scatters. It covers a large area, approximately 100 by 60 meters in size. There is a single standing structure with what appears to be an internal feature associated with milk cooling and six other less well preserved structures. Portions of an early historic irrigation system cross the site. Artifacts include cast iron stove parts, bottle glass, cement fragments, barbed wire, window glass, and various ceramics. Currently, the land is used as pasture, and it is located in the

Bv-32 "Sutherland School" Site
FIGURE 16

 FOUNDATIONS

 DATUM

 WELL

0 10 20 m



Bv-33 "Old German" Site

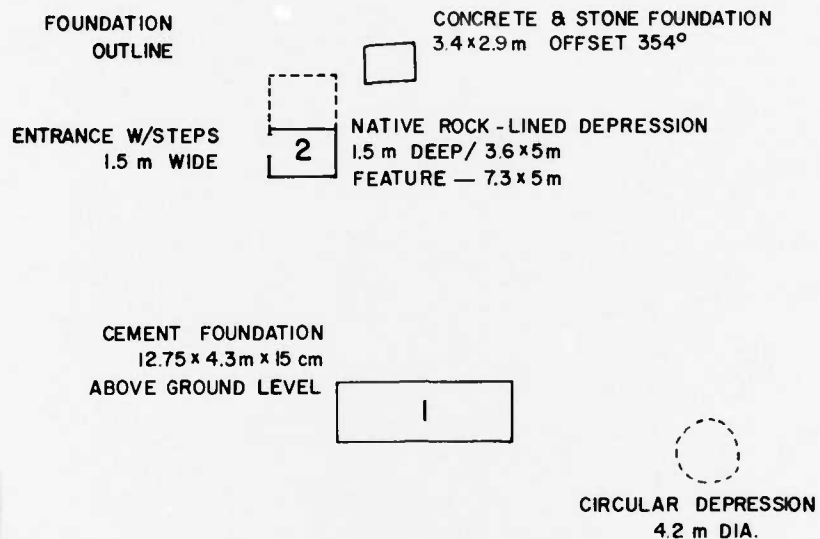
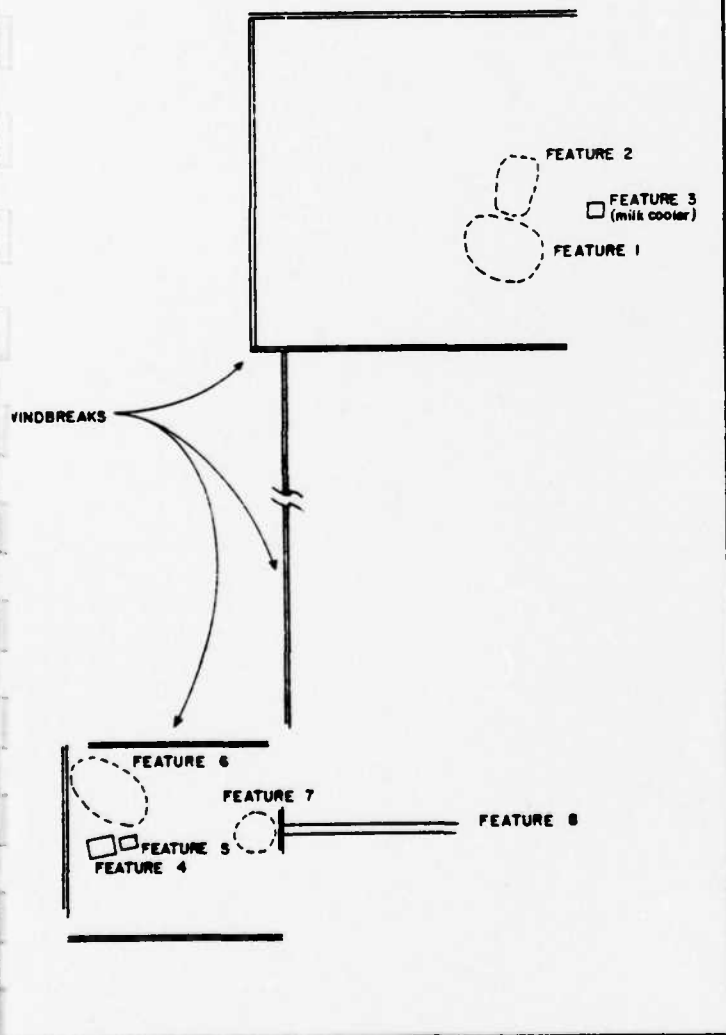


FIGURE 17

Site Bv-37



schematic
cross-sections

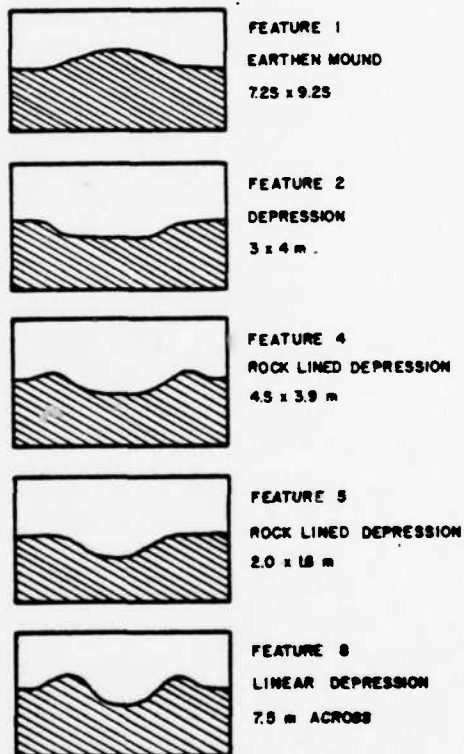


FIGURE 18



bottomland of the Cimarron at 2070 ft. AMSL. The site is in a Bottomland Sandsage association. Preservation is good.

Bv-38. This site (Figure 19) covers a large area, approximately five acres, and consists of an extensive scatter of historic artifacts in conjunction with a slight mound and a slight depression, both of which may represent remnants of architectural features. The site is probably residential in nature, although it might have been either a farm homestead or ranch headquarters. The artifacts include scrap iron, bottle glass, a bottle with a hand-applied finish, window glass, scrap tin, and a military rifle butt plate. There is also purpled glass and hard paste whiteware. The site is located in and around a road in a Bottomland Sandsage association at 2090 ft. AMSL. Preservation appears to be good.

BV-39. This is another extensive scatter (Figure 20), again about five acres in extent. Other similarities to Bv-38 include several depressions, a rise, and a windbreak. An old well also occurs. The site is in the bottomland, in a Sandsage association, at an elevation of about 2070 ft. AMSL. Artifacts observed were an enamelled metal pot, hole-in-top tin can fragments, scrap iron, window glass, and bottle glass. The site is in good condition.

Bv-41. This site, the Abbot farm (Figure 21), includes ruins of a dugout with cellar and fireplace, and what appears to be a chicken coop attached. It is located in a canyon in the breaks, at the base of a bluff at 2120 ft. AMSL. Stairways lead to a walkway along the top of the bluff. The house is constructed of local stone and mortar. There

FIGURE 19
Site BV-38



END OF ARTIFACTS

BUSH WINDBREAK

DEPRESSION
(c. 6 m. dia.)

DIRT ROAD (4 m. width)

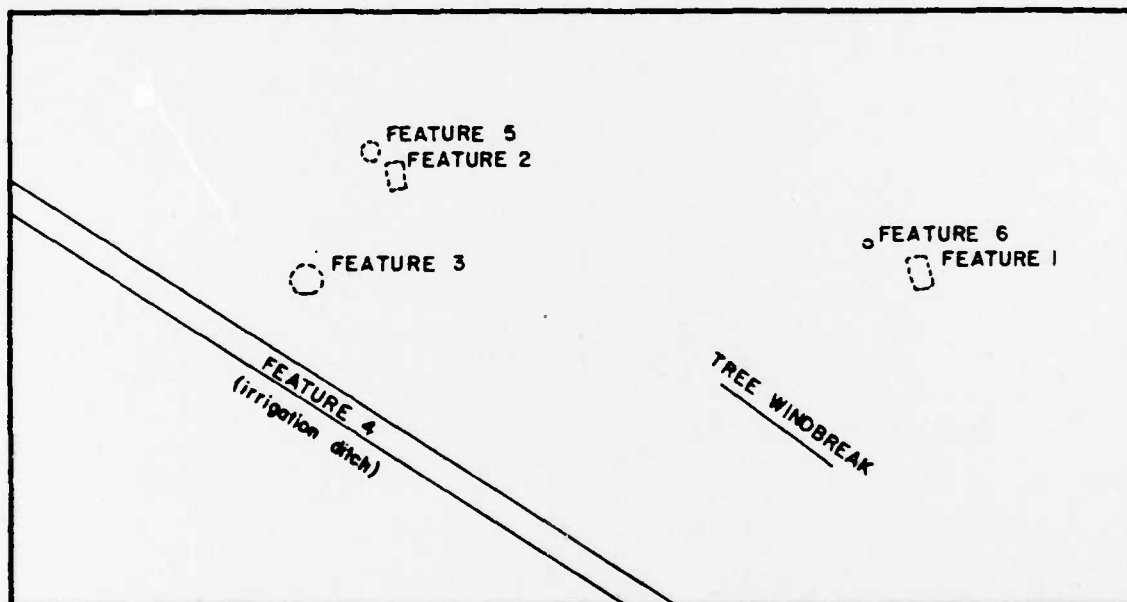
MOUND
(6.4 x 6.4 m)

ARTIFACTS AS FAR
UP THE ROAD AS FORK
(180+ meters)

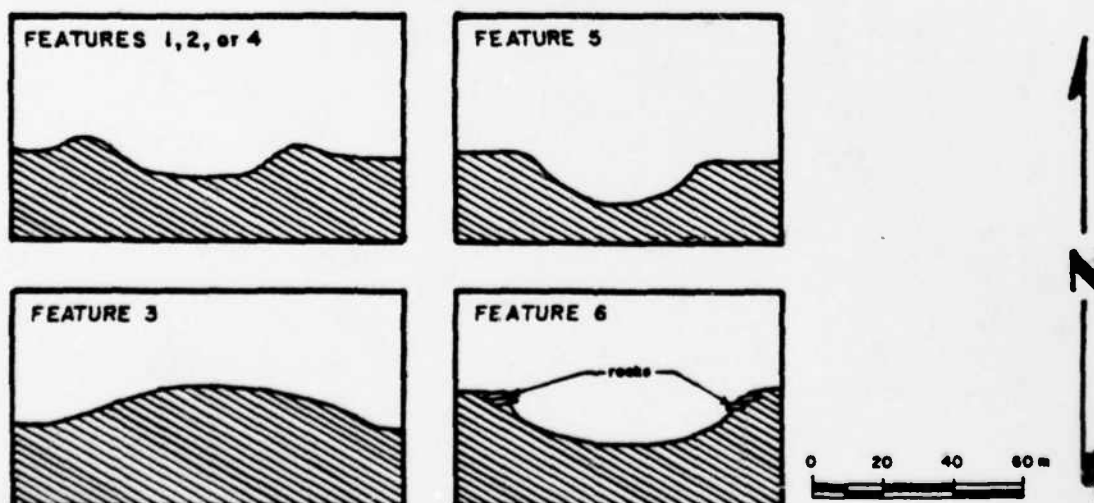


Site Bv-39

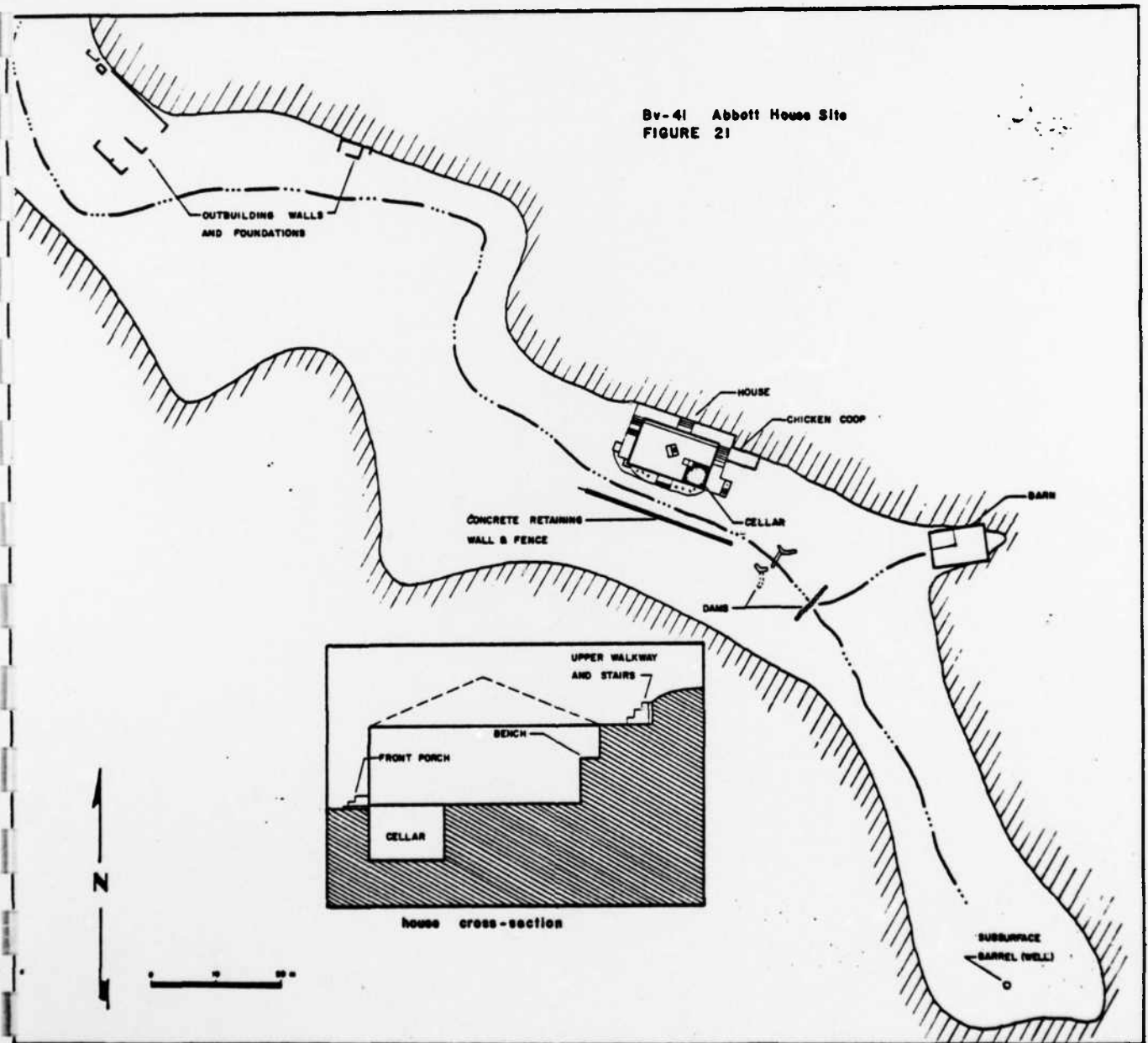
FIGURE 20



schematicized cross-sections



Bv-41 Abbott House Site
FIGURE 21



are several other foundations, and two wells. The associated artifacts are scattered over an area of about 20 by 25 meters. Artifacts include hand painted earthenware, purpled glass, blue glass, and fencing wire. The house is in good condition. Vegetation is mainly of Bottomland types.

Historic Site Analysis

The historic sites were all located in the bottomland and all, except the school site, are probably the locations of early residences dating to the late 1800s and early 1900s, most probably farmers' homesteads, although some may represent ranch headquarters. The location of the sites reflects the significance of agricultural activities. Such activities are reflected also by such features as the irrigation ditches, chicken coop, milk storage structure, and others. The rises and depressions at several of the sites most likely are remains of earlier architectural features, but extensive testing should produce additional evidence in this regard. Analysis of more complete material culture collections from the sites, obtained by such testing, should produce interesting information concerning the lifeways of early historic farmers and ranchers in the area.

Prehistoric Site Descriptions

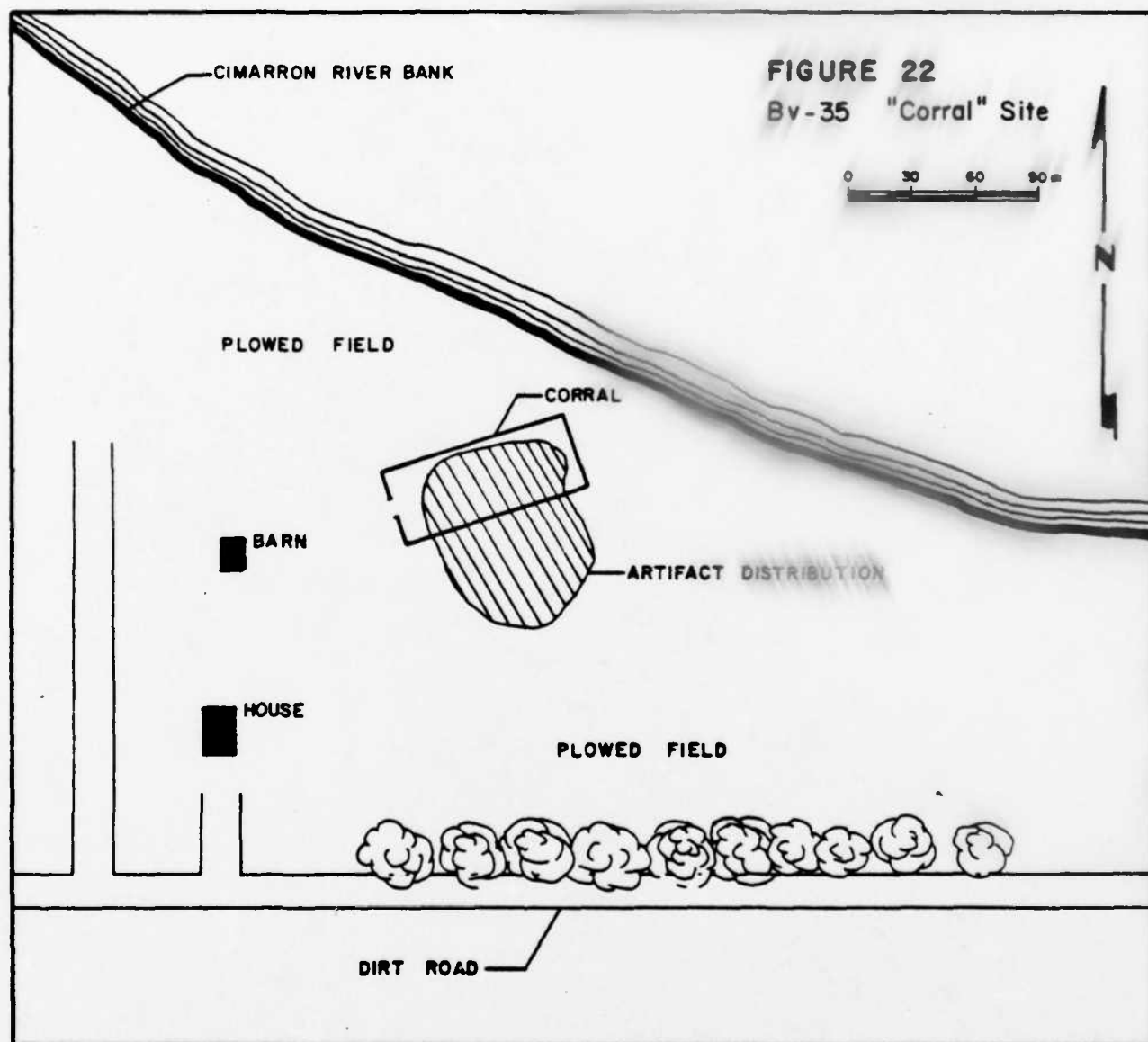
Bv-31. This site is a lithic and ceramic scatter that covers an area of about 120 by 60 meters on a north-south ridge in the breaks. It lies south of the Cimarron at an elevation of 2180 ft. AMSL. Artifactual material includes one diamond knife, a small triangular projectile point, pinched grey plainware rim sherds, a thin (3.1mm) mica tempered

sherd, thumbnail scrapers, and various retouched flakes, as well as assorted debitage. This site is late, temporally, and it may best be classified as a Panhandle Aspect site. Observations of erosional areas indicate that the depth of the deposit is approximately 50 cm. According to a local informant, Jenk Sutherland, the site appeared in the 1930s as a result of a blowout. Other evidence on the site includes mussel shell and a few unidentifiable bones. The site was plowed at an earlier date, but currently is in pasture. The association is Short Grass Prairie. Preservation is fair.

Bv-34. This is a small and sparse lithic scatter. Materials represented are mostly quartzite, with some chert. It occupies only about five by six meters at an elevation of 2140 ft. AMSL near the base of a ridge in the breaks. An intermittent stream bed is nearby. The site is badly eroded. Vegetation is typical of Short Grass Prairie. No artifacts or other deposits suggesting any depth were observed in eroded areas.

Bv-35. This is a scatter of lithic and ceramic materials (Figure 22) similar to Bv-31 but less dense and with more limited artifact variety. It too may best be classified as Panhandle Aspect. It is located in a plowed field on a bottomland rise adjacent to the south bank of the Cimarron. It occupies about 90 by 60 meters at an elevation of 2100 ft. AMSL. Preservation is fair, with little erosion, and depth was minimal.

Bv-36. This site (Figure 23) is also located on a ridge on the south side of the Cimarron River. No pottery or other diagnostic artifacts were found. The site is only a sparse scatter of lithic materials,



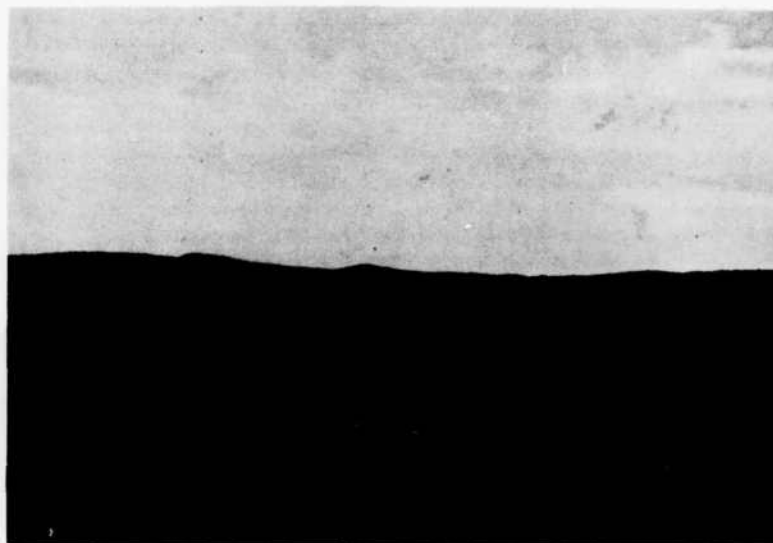


FIGURE 23 Bv-36

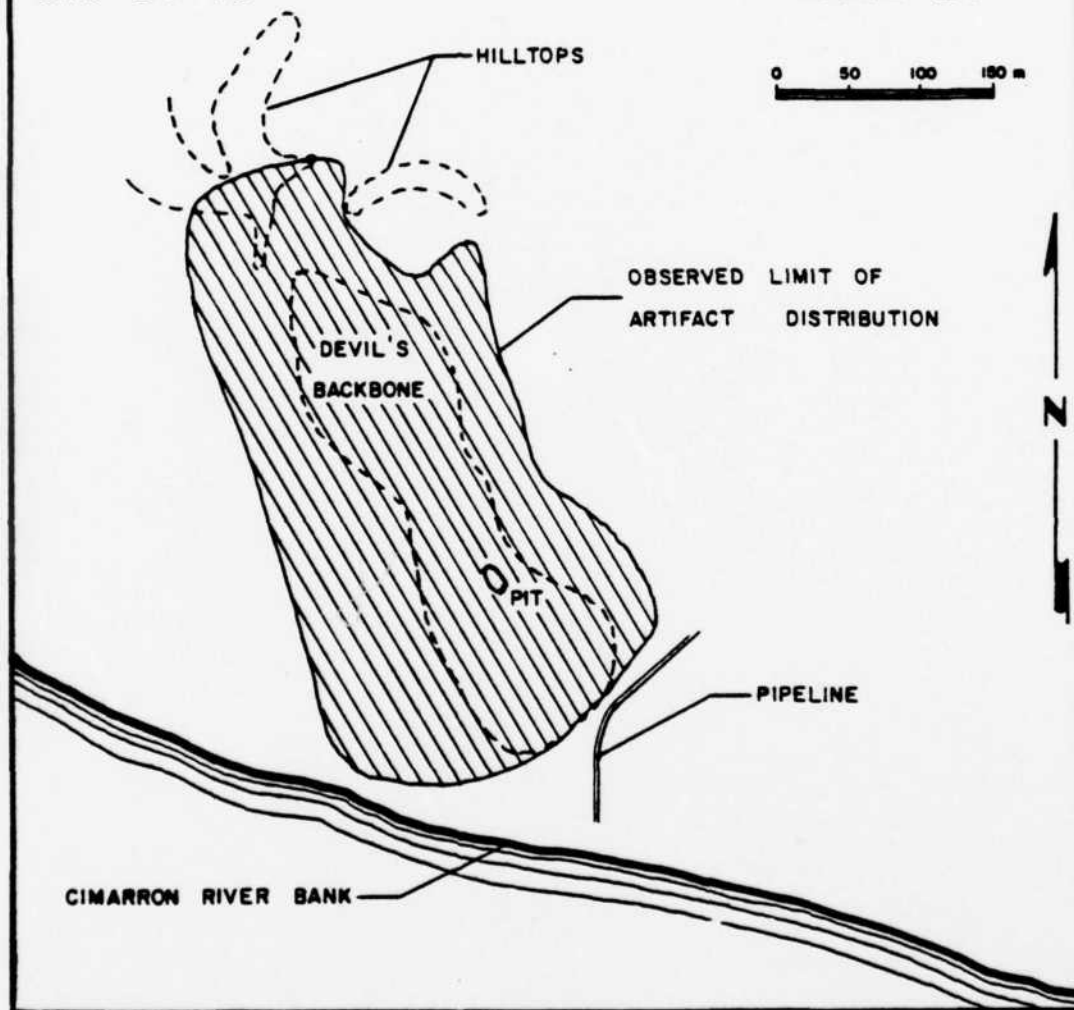
measuring about 200 by 75 meters. It is located in the breaks at an elevation of 2180 ft. AMSL in a Short Grass association. Several circular areas of vegetation discoloration, sometimes identified as tipi rings, were observed. Preservation appears good. Erosional areas suggest a deposit restricted to about 50 cm in depth.

Bv-40. This is a very large scatter (Figure 24) covering about a square kilometer. Probably, it represents a series of different occupations. It was reported to us by Charles Berends and by several other informants. It has been repeatedly collected by area residents, and no diagnostic artifacts were noted. However, it seems likely that with future erosion, such materials will appear. Artifact density was low; some bone and shell were observed in addition to lithic debris. The site is located about the "Devil's Backbone" mesa and adjoining hills, ridges, and arroyos. The higher points included could have served as observation posts to view game coming to water at the river below. One feature, a pit, was located on the backbone. The vegetation is mostly Short Grass Prairie, and the situation includes mainly the breaks. Various portions of the site are actively eroding, especially along the edge of the "backbone." Faunal material was observed eroding out to a depth of at least one meter, although no lithic artifactual material was observed to this depth.

Bv-42. This is a small, sparse lithic scatter located in the bottomland of an intermittent tributary of Horse Creek at an elevation of 2080 ft. AMSL, occupying about five by six meters. Items include lithic debris and mussel shells; possibly the site had a special function associated with mussel utilization. The site has been severely

Site Bv-40

FIGURE 24



disturbed by a Soil Conservation Service impoundment, and original depth of the site could not be ascertained. Regardless, it is unlikely that any in situ material remains.

Bv-43. This site also is a small, sparse lithic scatter (Figure 25) measuring about five by five meters in extent, and no materials were observed below the surface. As with Bv-42, no diagnostic materials were observed. This site also has been disturbed by a Soil Service impoundment. The site, reported to us by Clayton Kaspar, lies at an elevation of about 2130 to 2140 ft. AMSL on the bluff edge and creek bottom of an intermittent stream. A little historic trash was located, but no additional historic features. The site has been extensively disturbed.

Prehistoric Site Analysis

Seven prehistoric sites were discovered. All of these sites are located along the drainages of the Cimarron River or near Horse Creek; none were found along Crooked Creek. Most, with the exceptions of Bv-35 and Bv-42, are located along the valley ridges and breaks overlooking their respective streams. Both Bv-35 and Bv-42 are located in the bottomlands. All sites have been disturbed by agricultural activities, erosion, and/or collecting.

Because of the limited size and location of these sites, it is hypothesized that they are hunting camps or otherwise specialized function camps, such as locales for preparation of game or the gathering of mussels and plant foods. For the most part, the valley ridges and their associated breaks provide excellent locations for the observation of game. Ferring and others (1976:73) note that a similar situation exists



FIGURE 25 Bv-43

for sites further downstream on the Cimarron. It is likely that large game, such as buffalo or deer, would have watered occasionally at varying intervals at the streams and that these ridges would have provided advantageous tactical bases from which to hunt.

If the above is true, then one would expect, given the nature of buffalo behavior, that these sites were occupied for relatively short periods, since buffalo rarely stay in one spot and are apt to wander (McHugh 1972; Roe 1951). In addition, if the sites were occupied for short periods and revisited seasonally or on some other schedule, then the cultural material, if undisturbed, would ideally spread parallel to the river along the ridge line. This sort of pattern would create sites which can be viewed as cultural "plates" that represent thin horizontal occupations or clusters of artifacts. These plates may interdigitate in some cases or they may be separated vertically or horizontally, depending on the placement of sites and the geological nature of a specific locale. It is thought that this concept of small occupational plates, some interdigitated, on a relatively stable land surface, best describes the situation of sites that lie along the ridges.

Bottomland sites were probably located for the exploitation of riverine and floodplain resources, or, perhaps in later times, for close proximity to planted crops. Some bottomland sites were located in areas of active deposition and there is less chance of interdigitated sites occurring. Rather, some separation, at least vertically, would be expected.

The Prehistoric Artifacts

Bv-31. This site is a lithic, bone, and ceramic scatter from which

was collected a small grab sample for purposes of identifying cultural affiliation and site function. Most of the artifacts were left intact. Two sherds were collected--a punctate rim sherd and a very thin (2-3mm thick) sherd that may be Ocate Micaceous (Gunnerson 1969:26-27). Other diagnostic artifacts include a diamond-beveled knife of Alibates. A portion of a blade and a small, reworked triangular point were found also. The diagnostic materials indicate a late date for the site, possibly Panhandle Aspect. Also noted were petrified teeth as well as numerous mussel shell fragments. The teeth necessarily pre-date the site's occupation. This site was systematically collected as previously discussed, in addition to having the small grab sample taken.

Bv-34. The assemblage on this site was very limited. All lithic materials observed were flakes and no collection was made.

Bv-35. This bottomland site had a scatter of lithics and a few sherds. Diagnostic artifacts include a pinched or punctated rim similar to those at Bv-31 and Bv-36. Fifteen other items were collected, mainly retouched flakes. There was one blocky end scraper on unidentified material. A late date is indicated, possibly Panhandle Aspect.

Bv-36. This site is a lithic and ceramic scatter. A small collection of seven items was taken. These included a cord-marked sherd and a pinched or punctated rim sherd similar to the one from Bv-31. Again, a late date is indicated, possibly Panhandle Aspect.

Bv-40. This site contained an extensive but light scatter of unmodified flakes of quartzite, chert, and bone. No diagnostic items

were located, and no artifacts were collected. Indications are that collecting by local amateurs has been extensive.

Bv-42. This site contains a scatter of unmodified flakes and mussel shells. No diagnostic items were located and no artifacts were collected.

Bv-43. This is a very light scatter of unmodified flakes. No diagnostic artifacts were noted, nor were any artifacts collected.

Data on artifacts collected from the prehistoric sites is summarized in Table 5. Isolated artifacts are summarized in Table 6.

Cultural Affiliations and Site Functions

At this time it is not possible to determine the cultural affiliations or temporal parameters of any of the prehistoric sites with certainty. The affiliations of Bv-34, 40, 42, and 43 are entirely unknown. The materials at Bv-31, 35, and 36 suggest a late prehistoric date for those three sites, possibly Panhandle Aspect. Lintz (1974:8-9) claims that the punctated and pinched rim motifs are typically Panhandle Aspect in affiliation. The sherd from Bv-31 that resembles Ocate Micaceous, if indeed this is the correct identification, is roughly contemporaneous, though possibly a little later, dating to about 400 to 200 B.P., compared to Panhandle Aspect's accepted dates of about 750 to 500 B.P. The diamond beveled knife from Bv-31 may be Panhandle Aspect, although this form is found in other later cultural manifestations as well. Thus, although Panhandle Aspect seems the best assignment of these three sites, this cannot be considered firm at this time. Hopefully, future testing may allow a more positive identification.

TABLE 5
INVENTORY OF PREHISTORIC ARTIFACTS COLLECTED

Site No.	Artifact Class													Other						
	0	0a	1	1a	1b	1c	2	2b	2c	3	3b	3c	4		4b	4c	5	6	7	8
Bv-31			1		1	4*	2						8			2	2	2	2	1 pinched/punctate rim sherd 1 thin micaceous sherd 2 petrified bison teeth
*1c - 1 diamond knife, 1 bifacial notched piece, 1 biface fragment, 1 triangular projectile point N=26																				
Bv-35						1*				2			4	3	2#		4			1 pinched/punctate rim sherd 2 bone fragments
*1c - 1 biface tip #4c - 1 end scraper, 1 irregular scraper N=19																				
Bv-36						1*	1						1			2	1			1 pinched/punctate rim sherd 1 cord marked shert 2 pieces purpled glass 1 medicinal bottle neck 1 lamp chimney fragment, purpled 1 stoneware sherd, Albany interior, Bristol exterior
*1c - biface fragment N=13																				

TABLE 6
ISOLATED ARTIFACT INVENTORY

<u>Artifact Class</u>
4
1c (chert biface fragment)
2c (sandstone scraper)
3c (chert thumbnail scraper)
1
7
1

Again due to the scarcity of evidence, it is difficult to assess site function. There does seem to have been a propensity to establish small camps along the valley ridges, especially the southern ridge of the Cimarron. The most likely function for these sites, based on their size and location, is hunting camps, from which the occupants watched for game at the river below. However, it is also obvious that at some locations, at least, the utilization of mussel was an important function. Bv-40 appears of particular interest, as its great extent suggests that this location was of considerable importance to prehistoric peoples. Most likely, it was a location reused periodically for some purpose, again possibly as a lookout for game.

The possible Panhandle Aspect sites are also of interest, as they would be unusual for this Aspect in their lack of architecture. It is possible, though it does not seem likely based on the surface evidence, that some sub-surface architecture does exist. If these sites indeed do lack architecture, their role in the subsistence-settlement pattern of the time will be important to access.

Previously Recorded Sites

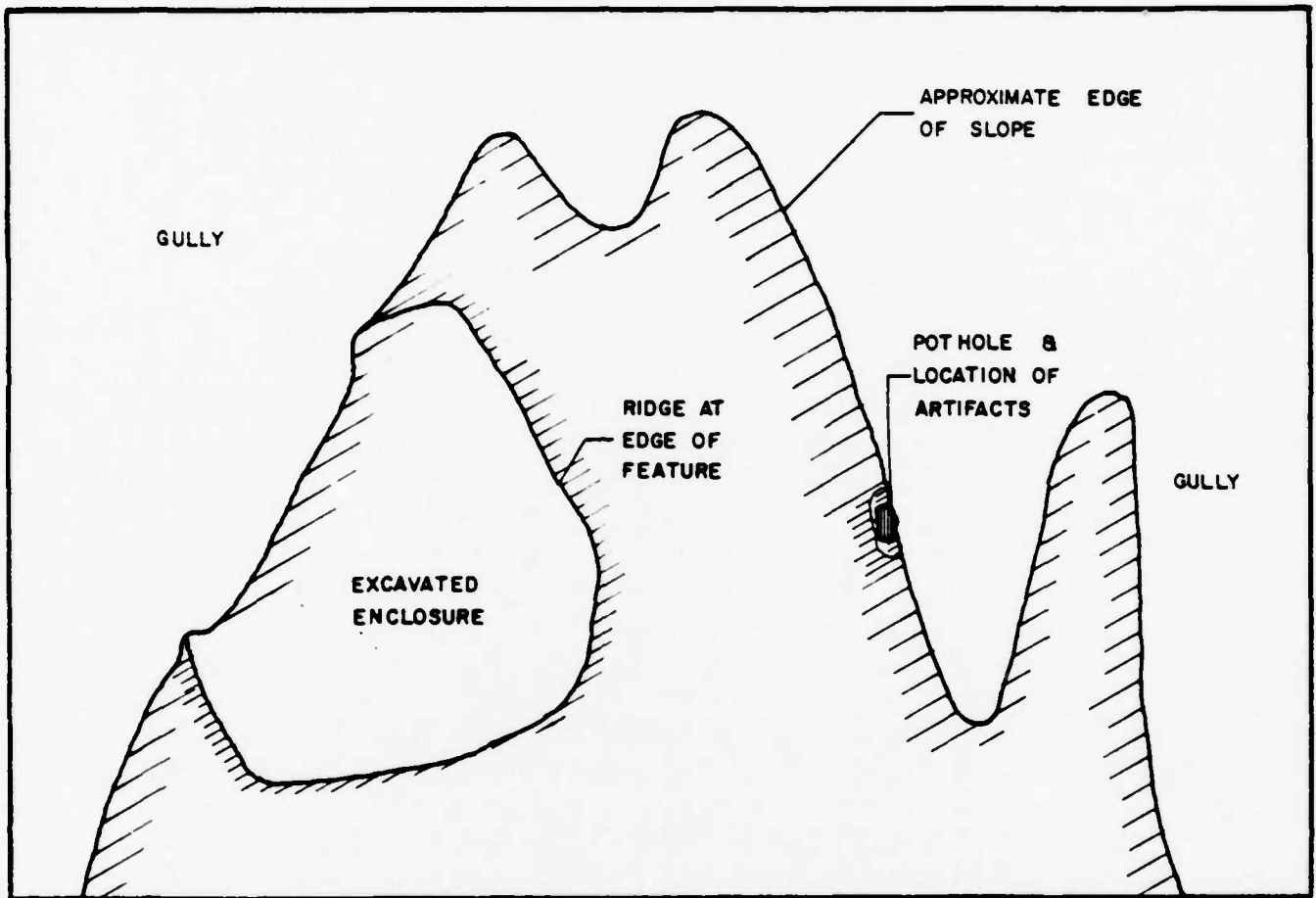
Of the six previously recorded sites in the project area, Bv-4, 15, and 17 were relocated during the present project. Bv-4, which is on the National Register of Historic Places, has been extensively collected and essentially stripped of surface material. Only one sherd with shallow incisions, three flakes, and some bone and mussel shell were noted during the recent survey. Also, a depression about 38 meters in diameter was noted on a northwest facing slope. This may represent a corral, or some other unidentified architectural feature. It is not known whether this

is historic or prehistoric. The site is located at 2100 ft. AMSL in the breaks (Figure 26). Bv-4 may best be considered a Panhandle Aspect site.

Bv-15 is located in the breaks near an intermittent tributary of the Cimarron. Previously, it produced a large number of artifacts, including pottery, projectile points, and various debris. Possible tipi rings were observed during the present survey, as well as a light but extensive (100 by 200m) scatter of debris. No diagnostic material was observed. The site is at an elevation of 2110 ft. AMSL.

Bv-17 is a light but very extensive lithic scatter over several ridges west of Horse Creek in the breaks. No diagnostic material was seen. The site appears to be more extensive than originally reported. It is across elevations of 2100 to 2140.

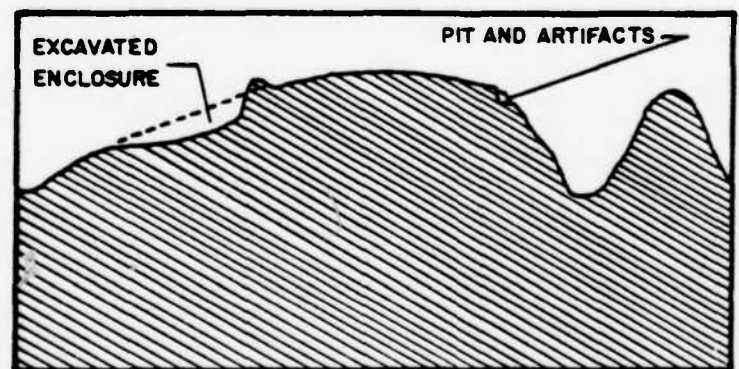
Previously recorded sites not relocated during the present survey include Bv-2, a small site along a low ridge west of Horse Creek. Artifacts previously found included flakes, pottery, mussel shells, and bone. The site was nominated to the National Register. Bv-3 included a minimum of lithic material near the confluence of Horse Creek and the Cimarron. Some historic irrigation ditches were reported, as well. Bv-7 originally contained several burials which were excavated by Thoburn in the 1930s. Several visits to the location during the present survey failed to locate any cultural materials.



Site Bv-4

FIGURE 26

0 10 20 m



generalized cross-section of the site

CHAPTER 7

SUMMARY AND CONCLUSIONS

Fourteen newly recorded sites were reported for the Englewood Lake project area as a result of this project. Of these, seven were prehistoric and seven historic. Added to previously recorded sites, a total of 24 sites have now been recorded for the project area.

These data indicate very sparse settlement of the area surveyed, over 20,000 acres, in both prehistoric and historic times. In part, this result may be a product of biased data. Much archeological information apparently has been destroyed by prior collecting activities, by modern agriculture, and by wind and water erosion. Thus, many sites may have totally disappeared. The inability of our crews to relocate previously recorded sites, and reports from locals concerning areas that once produced items for amateur collectors, both support this idea.

However, at least in part, the current archeological situation may be reflective of actual settlement patterns in, and use of, the project area. The evidence for prehistoric occupation suggests the area was used mainly for temporary and intermittent occupation. The most common use of the area prehistorically probably was for hunting, and the region probably was revisited frequently, possibly on a seasonal basis, by small hunting parties. Resources along the Cimarron River, particularly mussel, doubtlessly also attracted prehistoric populations, again on a short-term, seasonal basis. Such an interpretation of prehistoric use of the area is consistent with early historic records. This idea is further supported by the nature of the sites that may be Panhandle Aspect sites (Bv-4, Bv-31, Bv-35, and Bv-36). Although it is very

typical for Panhandle Aspect sites to contain remains of architectural features, no such features were observed at these sites. If we can assume that this is not simply a reflection of lack of preservation, then these may be special function sites, occupied briefly or seasonally by a Panhandle Aspect group that normally resided elsewhere.

The remaining prehistoric sites cannot be dated due to lack of temporal evidence. However, the area is notable in its lack of any firm evidence for an Archaic occupation. Other nearby areas, such as the Texas Panhandle (Hughes 1977) and southwestern Oklahoma (Hammatt 1976 and Leonhardy 1966b) consistently show evidence of such occupations. Again, this may be due to data bias, but it is possible that this area was not used in Archaic times.

Sparse settlement of the area continued into historic times, as reflected in both the documentary and archeological records. Throughout the historic period the major use of the area has been for agriculture, whether ranching or farming. Most sites mentioned in historic documents are ranch and farm headquarters, scattered widely across the landscape. A few special function sites, such as schools, stores, and churches, occur. However, these are few and far between, as are the few small population centers such as Gate, Oklahoma, and Englewood, Kansas.

Thus, it appears that the area has always been sparsely settled, and in prehistoric times was used frequently but not intensively for seasonal or periodic functions. However, because of the poor quality of the archeological data, even these very general conclusions must be viewed with caution.

CHAPTER 8

IMPACTS AND RECOMMENDATIONS

In all, 14 sites not previously recorded were located by this survey. Of these, seven were historic and seven were prehistoric, with one of the prehistoric sites (Bv-43) containing a little historic trash. With the exception of Bv-31 and 36, all sites located will be inundated or otherwise directly damaged by the construction of Englewood Lake. Bv-31 and 36 are located just above the projected pool level, so would likely suffer from visitor impacts. Bv-40 and 41 are located in an area that will be impacted by dam construction, and are likely to be very severely damaged by that work.

Because so little work has been done in the area, it is recommended that all of the sites, with the exception of Bv-30 and 34, receive additional attention. In most cases, however, extensive controlled surface collection and minimal testing should be sufficient. The decision to invest more intensive work in a site should be deferred until after this preliminary testing.

All the prehistoric sites have been damaged to some extent by erosion, agricultural activities, and especially by collecting activities. Additionally, two (Bv-42 and 43) have been impacted by the construction of a Soil Conservation Service flood water retaining impoundment. Regardless, those recommended for further work probably still are capable of producing information important to the understanding of cultural processes in the prehistoric occupation of the area. This is particularly true of the sites that may be associated with the Panhandle Aspect. All four of these sites appear to be special function sites and as such represent a portion of

the Panhandle Aspect settlement pattern that as yet has been little studied. The apparent lack of architecture at these sites is of particular interest.

The historic sites represent a range of homestead types, plus one school location. In most cases, controlled collecting, detailed mapping, and minimal testing to obtain an artifact sample for purposes of discerning any temporal or functional trends in the assemblages should be sufficient. Testing of the unidentified depressions and rises at Bv-38 and 39 is recommended. Additionally, it should be useful to compare the assemblage obtained from Bv-32, the school site, with the assemblages from the various homesteads, to determine whether the functional difference of the sites is reflected in the artifactual assemblage. Bv-39, possibly the oldest historic site located, should receive special consideration.

Of the previously reported sites relocated during the present survey, all three should have at least some testing. Bv-4, which has had essentially all surface material collected, should have minimal testing to determine, among other things, the nature of the observed depression. Bv-15 and 17 should have a controlled surface collection and minimal testing. Impacts and recommendations are summarized in Table 7.

TABLE 7
SUMMARY OF IMPACTS AND RECOMMENDATIONS

Site Number	Impact	Recommendation
<u>Historic</u>		
Bv-30	Inundation	No additional work
32	Inundation	Test to collect artifact sample
33	Inundation	Mapping and test for sample
37	Inundation	Mapping and testing
38	Inundation	Controlled collection and testing
39	Inundation	Controlled collection and testing
41	Inundation and dam construction	Mapping and test for sample
<u>Prehistoric</u>		
Bv-31	Just above pool - visitor impact	Extensive controlled collection and testing
34	Shore line inundation	No additional work
35	Inundation	Controlled collection and minimal testing
36	Just above pool - visitor impact	Extensive controlled collecting and testing
40	Inundation and dam construction	Controlled collection and minimal testing
42	Inundation	Controlled collection and minimal testing
43	Inundation	Minimal testing on bluff
<u>Previously Recorded Sites</u>		
BV-4	Inundation	Minimal testing
15	Inundation	Controlled collection and minimal testing
17	Inundation	Controlled collection and minimal testing

APPENDIX A

PALEONTOLOGICAL SITES

During our survey we found numerous fossils; these were not collected. However, areas that had large concentrations or deposits of fossilized materials were noted and located. One location (a) was in an arroyo west of Horse Creek. This place is at the approximate location of Bv-17. Another (b) was discovered on the east side of Horse Creek. This is a large concentration which measures about 800 m x 800m. Fossils of aquatic animals seem abundant and various long bone portions were also found. On the north side of the Cimarron in various arroyos there are numerous loci of fossil concentrations (c). These were reported to us by Bernard Smith and they were examined by our crews for the possibility of discovering bison kill sites. No kill sites were discovered, but there are a considerable number of fossilized items in the area.

ARA SITE SURVEY FORM
(a guide to completion)

There are three parts to the survey form. Pages one and two are to be filled out in the field, with the exception of the entry on site size (discussed below). Page three is meant to be filled out in camp, at the completion of each day's work. Page four will be filled out later, in the lab. Instructions for pages one to three follow.

Pages one and two

1. Site field number - this has two parts, the survey parcel number and the site number within each parcel.
2. Crew - last names of all persons present at the site when the form was filled out
3. Project - project name, and funding institution, if applicable
4. Photos - number of photos taken, field number of photo (roll and frame number)
5. Site description - a brief, concise description of site situation, artifacts, features
6. Artifacts present - more detailed list/description of artifacts, possible functions
7. Features present - more detailed list/description of features, such as hearths, walls
8. Temporally diagnostic cultural materials - detailed description and drawing of diagnostic details, such as outline of projectile point, lettering on glass, ceramic marks, bottle necks
9. Distribution of cultural material - noticeable clusters of artifacts/features, associations among clusters
10. Relative artifact density - a rough estimate of site artifact density, such as light, medium, heavy
11. Size - in square meters, determined later based on site and quad maps

Site Condition

12. Preservation of horizontal provenience - does it appear that the horizontal location of artifacts/features is undisturbed - what is the evidence on this?
13. In situ material - are there features/artifacts in their original stratigraphic position? Underline the most correct response. If there are, they should appear in the site description
14. Depth of material - depth of in situ materials, how was this determined (did you trowel off a gully face, do a test pit, or take a guess, etc.)
15. Damage/erosion - how much of the site is damaged, that type of damage (sheet erosion, gullying, plowing, bulldozing, etc.)

Site Setting

16. Plants - common names of current vegetation, which dominate
17. Landform - what kind of situation does the site occupy - alluvial floodplain, valley slope, bluff top or base, terrace, etc.
18. Natural resources - nonorganic resources which might have been used (clay deposits, chert, asphalt, salt, etc.)
19. Degree of vegetation cover - an estimate of how much of the site's surface is visible (in percent)
20. Site surface - what composes the surface - soil type (sand, silt, clay), gravel, bedrock, etc.
21. Past and present land use - present use such as fallow, cultivated, pasture, woodland, etc., and past, if known

Page three

1. Project impact on site - what effects will the present project have on the site, such as inundation, disturbance from construction, shoreline inundation, etc. This relates directly to the elevation of the project and of the site, in most cases.
2. Site location in relation to permanent landmarks - how far and in what direction does some prominent feature occur, to aid in site relocation.
3. Physiographic province - there are 26 provinces defined for Oklahoma (Curtis and Ham, 1972); in which does the site occur
4. Duck and Fletcher community - what game type (plant and animal community does the site occur in, derived from Duck and Fletcher (1943, 45)
5. Stream rank(s) and/or wells - this seeks information on the water supply of the site's original occupants. Each line requires the stream rank, possible name, distance to site, and check regarding P (permanent), I (intermittent), or F (fossil). Wells are relevant only on historic sites
6. UTM - this requires the UTM zone number, located in the lower left corner of each USGS map, and the easting and northing coordinates - USE UTM TEMPLATE
7. Legal location - quad sheet name, date, and size; county in which site occurs

SITE SURVEY FORM

125

Site field number _____

Date _____

Crew _____

Parcel number _____

Project _____ Photos _____

Site description _____

Artifacts present _____

Features present _____

Temporally diagnostic cultural materials (illustrate on back) _____

Distribution of cultural material (clustering, etc.) _____

Relative artifact density _____

Size _____

Site condition

preservation of horizontal provenience _____

in situ, subsurface material - unlikely, possible, probable, definite

depth of cultural material _____ means of determination - estimate, measurement

extent/nature of damage/erosion _____

Site setting

plants on or near site _____

landform _____

natural resources on or near site _____

degree of vegetation cover _____

site surface (soil type, bedrock, etc.) _____

past and present land use _____

Project impact on site _____

Site location in relation to present landmarks _____

Physiographic province _____

Duck and Fletcher community _____

Stream rank(s) and/or
wells

P	I	F

UTM zone _____, easting _____, northing _____

legal location

____ $\frac{1}{4}$ of the ____ $\frac{1}{4}$ of the ____ $\frac{1}{4}$ of Sec. ____, T ____, R ____

Quad sheet name _____ and date _____

and size _____

County _____

DO MAP ON BACKSIDE

ATTACH SITE PLAN

State site number _____

date _____

Owner _____ Address _____

Location of legal records _____

Previous records, surveys, citations _____

Site significance _____

Research and management potential _____

Photo record number _____

SURVEY UNIT REPORT

129

Project _____

Date _____

Parcel number _____

Crew _____

Legal description

1/4 of the 1/4 of Sec. 1, T 1, R 1

Site and isolated artifact data

ID number

Description

[illegible]

Summary of cultural and environmental features, and comments (inc. estimate of % of area in modern plant communities; % of ground surface visible; rank of dominant stream; range of elevation; land forms present)

ISOLATED ARTIFACT FORM

130

Project _____

Date _____

Parcel ID number _____

Legal location of parcel _____ 1/4 of the _____ 1/4 of Sec. _____, T _____, R _____

UTM zane _____

[illegible]

APPENDIX C

SITE LOCATIONS

Site Number	Location	UTM
Bv-30	SE1/4, NW1/4, SE1/4, S29, T6N, R27E	Z14, E ³ 96 ⁹⁴⁰ , N ⁴⁰ 90 ²²⁰
31	NW1/4, NW1/4, NW1/4, S32, T6N, R27E	Z14, E ³ 95 ⁹⁸⁰ , N ⁴⁰ 89 ⁶⁴⁰
32	NE1/4, NW1/4, NE1/4, S32, T6N, R27E	Z14, E ³ 97 ⁰⁴⁰ , N ⁴⁰ 89 ⁶⁰⁰
33	SW1/4, SW1/4, NE1/4, NW1/4, NW1/4, SW1/4, S34, T6N, R27E	Z14, E ³ 99 ²²⁰ , N ⁴⁰ 89 ³⁰⁰
34	SW1/4, NE1/4, SE1/4, S33, T6N, R27E	Z14, E ³ 98 ⁹²⁰ , N ⁴⁰ 88 ⁵²⁰
35	SW1/4, SE1/4, NE1/4, S34, T6N, R27E	Z14, E ³ 99 ⁵⁷⁰ , N ⁴⁰ 89 ⁰⁶⁰
36	SW1/4, SW1/4, SW1/4, S35, T6N, R27E	Z14, E ⁴ 01 ⁰⁰⁰ , N ⁴⁰ 88 ²²⁰
37	Much of E1/2 of SE1/4, S25, T6N, R27E	Z14, E ⁴ 03 ⁸⁰⁰ , N ⁴⁰ 90 ¹⁴⁰
38	NE1/4, SW1/4, NW1/4, S25, T6N, R27E	Z14, E ⁴ 02 ⁷⁵⁰ , N ⁴⁰ 90 ⁷⁰⁰
39	NE1/4, SW1/4, SW1/4, S29, T6N, R27E	Z14, E ⁴ 04 ⁶²⁰ , N ⁴⁰ 89 ⁸⁶⁰
40	Much of S33, T6N, R28E	Center Z14, E ⁴ 06 ³⁰⁰ , N ⁴⁰ 89 ³⁰⁰
41	NE1/4, NW1/4, SW1/4, S3, T5N, R28E	Z14, E ⁴ 07 ⁸⁴⁰ , N ⁴⁰ 87 ¹⁰⁰
42	SW1/4, NE1/4, SW1/4, S16, T5N, R28E	Z14, E ⁴ 07 ²²⁰ , N ⁴⁰ 83 ⁶⁸⁰
43	SW1/4, NE1/4, SW1/4, S76, T5N, R28E	Z14, E ⁴ 07 ²²⁰ , N ⁴⁰ 83 ⁶⁸⁰
15	SE1/4, SW1/4, SE1/4 S34, T6N, R27E	Z14, E ³ 99 ⁸⁵⁸ , N ⁴⁰ 88 ³⁵⁵
17	NE1/4, NE1/4, SW1/4, S4, T5N, R28E	Z14, E ⁴ 06 ⁴⁰³ , N ⁴⁰ 86 ⁸⁴²
and	SW1/4, SE1/4, SE1/4, S5, T5N, R28E	Z14, E ⁴ 05 ³⁵⁷ , N ⁴⁰ 86 ⁸⁵⁵

Three areas with no artifactual remains but with possibly significant paleontological evidence were located, as follows:

S4, T5N, R28E
NW1/4, S10, T5N, R28E
S17, 18, 19, 20, T6N, R27E

Arroyos west of Horse Creek
East side of Horse Creek
Scattered on various arroyos

ISOLATED ARTIFACT INVENTORY

Artifact Class	Location
4	SE1/4, SW1/4, Sec. 16, T5N, R28E
1c (chert biface fragment)	SW1/4, SE1/4, Sec. 33, T6N, R27E
2c (sandstone scraper)	NE1/4, NW1/4, Sec. 4, T5N, R28E
3c (chert thumbnail scraper)	SE1/4, SE1/4, Sec. 10, T5N, R28E
1	NW1/4, SE1/4, Sec. 34, T6N, R27E
7	NE1/4, NW1/4, Sec. 32, T6N, R27E
1	SE1/4, SE1/4, Sec. 33, T6N, R27E

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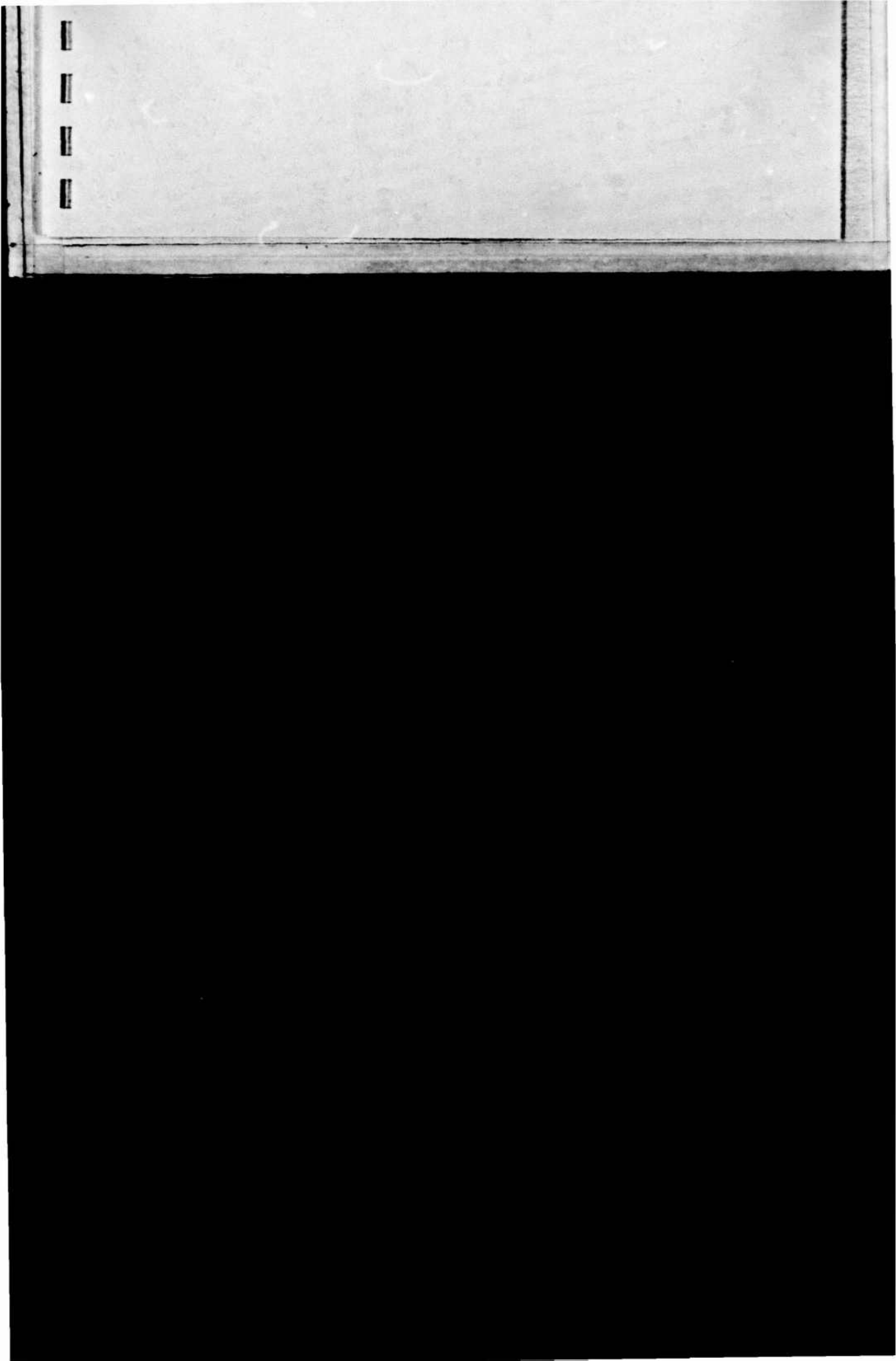
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DATE
ILME

Relative artifact density _____

Size _____



DO MAP ON BACKSIDE

ATTACH SITE PLAN

Site Num

BV-30

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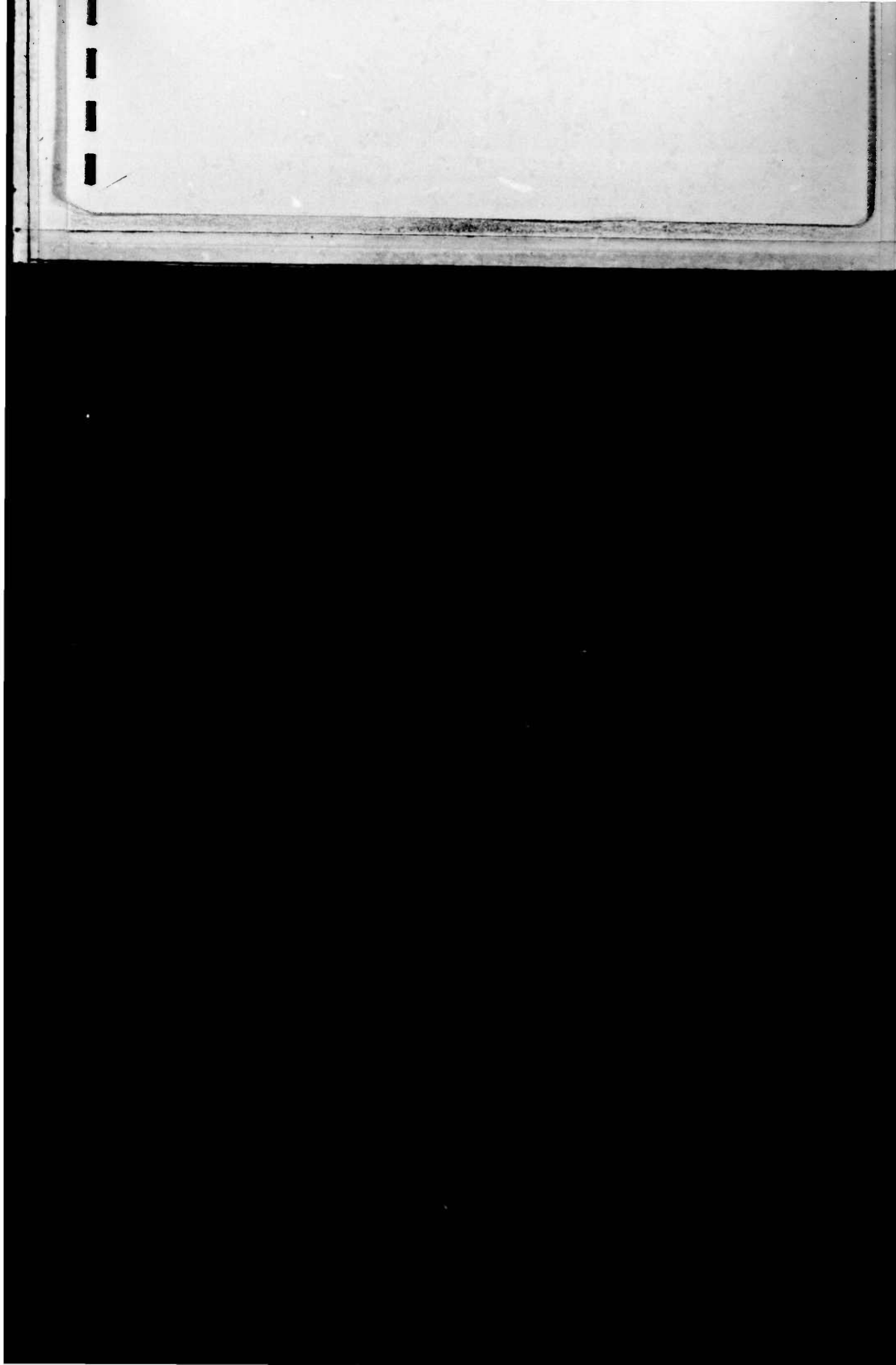
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